IMPORTANT INSTRUCTIONS - OPERATING MANUAL

Models AKCV1225, AKCV1380, AKCV1310 — Air King Ventilation Products® — **Central Vacuum**

READ AND SAVE THESE INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING TO ASSEMBLE, INSTALL, OPERATE OR MAINTAIN THE PRODUCT DESCRIBED. PROTECT YOURSELF AND OTHERS BY OBSERVING ALL SAFETY INFORMATION. FAILURE TO COMPLY WITH INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE!

RETAIN INSTRUCTIONS FOR FUTURE REFERENCE.

GENERAL SAFETY INFORMATION

When using electrical appliances, basic precautions should always be followed to reduce the risk of fire, electric shock and injury to person, including the following:

WARNING: TD REDUCE THE RISK DF FIRE, ELECTRIC SHDCK AND INJURY TD PERSDN, DBSERVE THE FDLLDWING:

1. Read all instructions before installing or using the central vacuum.
2. Use this central vacuum only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electrical shock, or injury to persons.

WARNING: DD NDT DEPEND UPDN THE UNIT'S CDNTRDLS AS THE SDLE MEANS DF DISCDNNECTING PDWER WHEN INSTALLING DR SERVICING. ALWAYS UNPLUG THE UNIT.

3. Before servicing or cleaning the unit, unplug the unit.
4. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-related construction.
5. Make certain that the power source conforms to the electrical requirements of the unit.

CAUTION: THIS UNIT MUST NDT BE USED IN PDTENTIALLY DANGERDUS LDCATIDNS SUCH AS FLAMMABLE, EXPLDSIVE, CHEMICAL-LADEN DR WET ATMDSPHERES.

6. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.

CAUTION: EXHAUST SHDULD NDT BE VENTED INTD A WALL, CEILING, DR CDNCEALED SPACE WITHIN THE HDME.

7. This unit is not intended for use on wet or outdoor locations, flammable or combustible liquids, burning or smoking items such as cigarettes, matches, or hot ashes.
8. The central vacuum must be grounded as a precaution against possible electrical shock.
9. Do not use with damaged cord or plug.
10. Do not insert any objects into openings other than acceptable hose connections.
11. Use extra care when vacuuming on stairs.
12. To avoid motor bearing damage and noisy and/or unbalanced impellers, keep drywall spray, construction dust, etc. off power unit.

WARNING: TD REDUCE THE RISK DF FIRE, ELECTRIC SHDCK, DD NDT USE THIS FAN WITH ANY SDLID-STATE SPEED CDNTRDL DEVICE.

ELECTRICAL REQUIREMENTS

WARNING: IMPRDPER CDNNECTIDN DF THE EDUIPMENT-GRDUNDING CDNDUCTDR CAN RESULT IS A RISK DF ELECTRIC SHDCK. CHECK WITH A DUALIFIED ELECTRICIAN DR SERVICE PERSDN IF YDU ARE IN DDUBT AS TD WHETHER THE DUTLET IS PRDPERLY GRDUNDED. DD NDT MDDIFY THE PLUG PRDVIDED WITH THE UNIT- IF IT WILL NDT FIT THE DUTLET, HAVE A PRDPER DUTLET INSTALLED BY A DUALIFIED ELECTRICIAN.

WARNING: THIS UNIT IS FDR USE DN A NDMINAL 120 VDLT CIRCUIT AND HAS A GRDUNDING PLUG. MAKE SURE THAT THE UNIT IS CDNNECTED TD AN DUTLET HAVING THE SAME CDNFIGURATIDNS AS THE PLUG. ND ADAPTER SHDULD BE USED WITH THIS UNIT.

This unit requires a dedicated, grounded electrical outlet of 120 volts AC, 60 Hz, 15 amp circuit.

SAVE THESE INSTRUCTIONS

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INSTALLATION INSTRUCTIONS

1. Unpack central vacuum power unit from the carton and confirm that all pieces are present. In addition to the power unit you should have:
   - 1 - Power unit mounting bracket
   - 1 - Inlet valve
   - 1 - Instruction/Safety Sheet

Planning the Installation

The Air King Central Vacuum System consists of three major components. The power unit, fittings including the inlet valves and tubing, and the tool kit. The power unit is designed to be permanently mounted in one location with connections made to the living area with a network of inlets and tubing.

Locating the Power Unit

1. The power unit can be located in a garage, basement, utility room, or any other room that allows for sufficient ventilation, is dry, and provides accessibility to the unit for emptying the collection canister.

CAUTION: IF THE POWER UNIT IS INSTALLED IN A CLOSET OR UTILITY ROOM, IT MUST BE VENTED TO PROVIDE ENOUGH AIR FLOW. LOUVERED DOORS CAN BE USED. DO NOT MOUNT IN A HIGH AMBIENT TEMPERATURE AREA SUCH AS ATTIC, FURNACE ROOM, ETC.

NOTE: If venting the unit to the outdoors, avoid venting to areas such as patios or entranceways.

2. The power unit should be mounted within 5 feet of an acceptable outlet. Check the electrical specifications of your specific unit to ensure the circuit is not being overloaded. A dedicated 15 amp circuit should be used.

Locating the Inlet Valves

1. The number of inlet valves will be determined by the layout of your home. The hose must be able to reach every corner of the home including inside closets and around furniture. Inlets should be placed in central locations and avoid placing behind furniture or doors.
2. Using a 30 foot piece of string or the hose itself, have one person hold one end to the planned inlet location and have the second person walk around the room(s) to determine if more inlets are needed. Continue this exercise until you can reach every area of the home **(Figure 1)**.

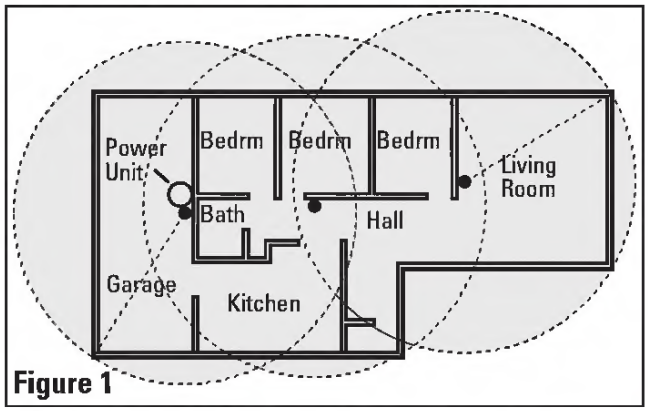

Figure 1

3. If the installation is for new constructions and you are working with 1/4" scale blueprints, use a seven inch string to represent the hose.

NOTE: If an electrical tool kit with a corded hose will be used, make sure an electrical outlet is located within 5 feet of the inlet.

Planning the Tubing System

1. The tubing system will include a main trunk line that will flow from the furthest wall inlet back to the power unit and can be run through the basement or the attic **(Figure 2)**. The trunk line should be kept as straight as possible to maximize the unit performance. When elbows are needed 45° fittings should be used or if a 90° connection is required, a sweep elbow should be used.

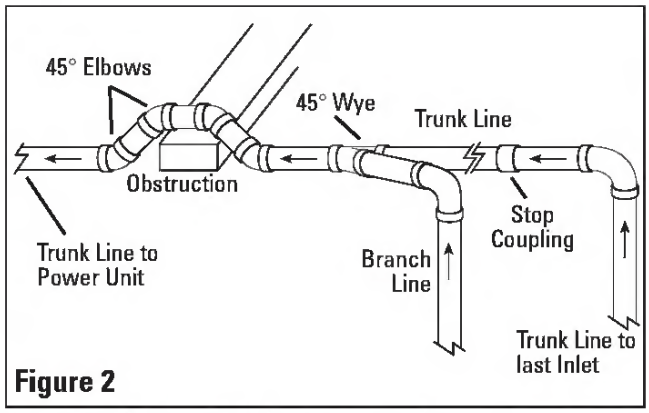

Figure 2

2. Branch lines join the remaining inlets to the trunk line and can be run through walls, closets, cold air return duct, etc. As with the trunk line, branch lines should be kept at straight as possible.
3. Avoid gravity drops in the branch line. A branch line located directly below an overhead trunk line will accumulate dirt due to the effects of gravity. The result will be a pile of debris at the base of the inlet valve each time it is opened **(Figure 3)**.

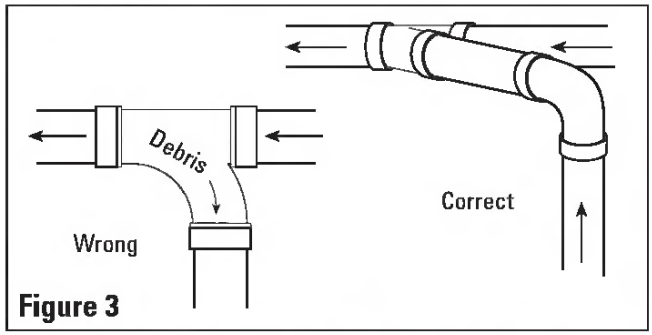

Figure 3

CAUTION: MAKE SURE TUBING WILL NOT OBSTRUCT OR INTERFERE WITH ELECTRICAL, PLUMBING, OR OTHER MECHANICAL INSTALLATIONS.

Installation into New Construction

Installing the Inlet Valves

1. Using flush mounting screws (not provided) install the appropriate inlet mounting plate to the wall stud **(Figure 4)**.

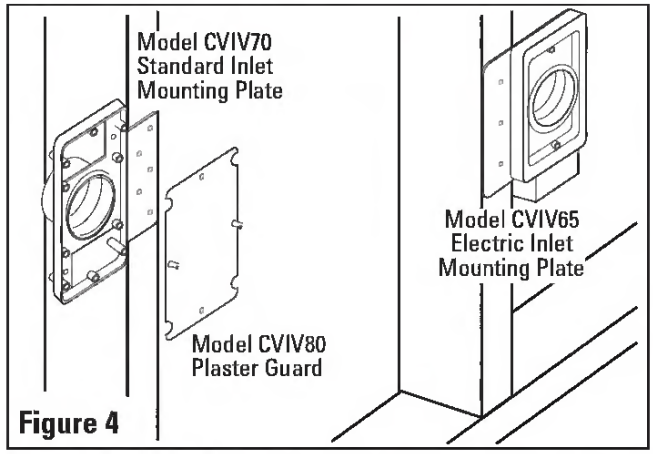

Figure 4

NOTE: Installation height will depend on personal preference, but generally the inlet is installed 18" above the finished floor.

2. To protect the system during the drywall phase of construction, an optional CVIV80 plaster guard can be utilized and should be installed at this point.

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Installing the Tubing

NDTE: When installing the tubing, start at the farthest inlet and work towards the power unit. Keep the tubing as straight as possible with the least amount of elbows and tees as possible to ensure maximum performance of your system. When installing tees or elbows, make sure the curve in the fitting is aligned so that the air flow is towards the power unit.

1. Cut a 2-1/2" diameter hole in the sole plate, header, or stud directly in line with the opening of the inlet fitting **(Figure 5)**.

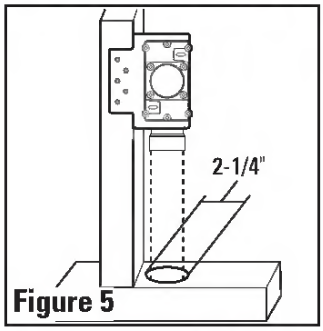

Figure 5

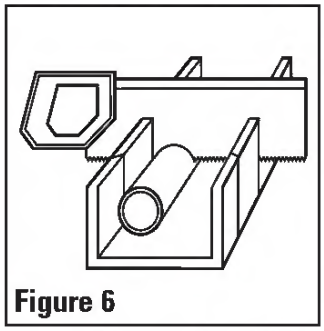
Figure 6

2. Measure the length of tubing needed to connect into the main trunk line, adding approximately 3/4" of tubing for insertion into fittings.
3. Cut the tubing, taking care to keep the straight square edge. The use of a miter box is recommended **(Figure 6)**.
4. Remove rough edges with a utility knife or coarse sand paper **(Figure 7)**.

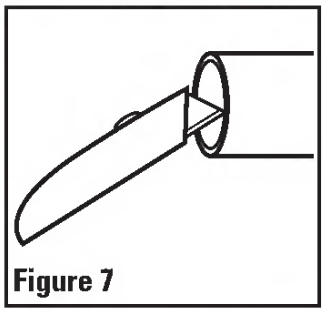
Figure 7

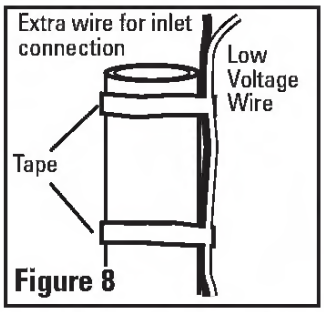

Figure 8

5. Dry fit all pieces and ensure proper fit and alignment before cementing.
6. When dry fitting tubing, run low voltage wire (minimum, solid 18 gauge, two conductor) by securing to tubing with tape. Allow approximately 6" of excess wire for connection to each inlet **(Figure 8)**.

NDTE: PVC solvent cement "welds" the fitting to the tubing through a chemical reaction to produce an air tight seal. It is important to make sure all surfaces are clean and free of burrs to ensure a proper seal.

7. Once all tubing has been cut, cleaned, and checked for fit, apply model CVFA35 PVC cement (not included) or equivalent cement to the outside of the tubing covering about 1". **DD NDT** allow any of the cement to enter the inside of the tubing **(Figure 9)**.

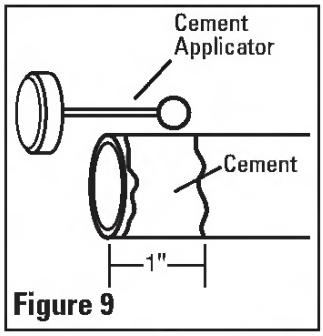

Figure 9

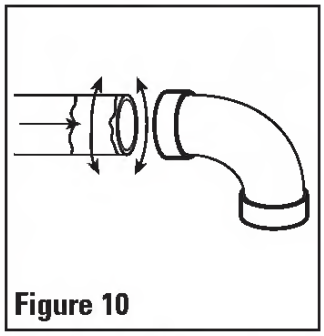
Figure 10

8. Insert tubing with cement into fitting with a twisting motion to ensure the cement has been evenly spread. Check that the tubing is evenly seated in the fitting and is aligned properly with the rest of the line **(Figure 10)**.

Installing Wall Inlet Models CVIV60A or CVIV60W

CAUTION: INSTALLATIDN WDRK AND ELECTRICAL WIRING MUST BE DDNE BY QUALIFIED PERSDN(S) IN ACCDRDANCE WITH ALL APPLICABLE CDDES AND STANDARDS, INCLUDING FIRE-RELATED CDNSTRUCTIDN.

CAUTION: MAKE SURE PDWER IS SWITCHED DFF AT SERVICE PANEL BEFDRE STARTING INSTALLATIDN.

1. Once the drywall has been completed, the wall inlets can be installed. Start by checking the mounting plate for any debris that might have been left from the drywall process and clean if necessary.
2. Connect the low voltage wire to the terminal screws on the rear of the wall inlet **(Figure 11)**.

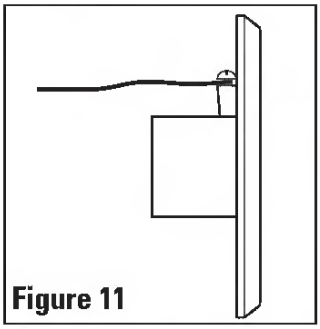
Figure 11

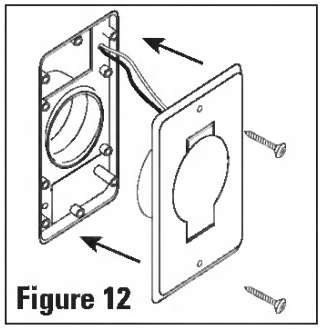
Figure 12

3. Align the inlet screw holes with the mounting plate holes and press the inlet into place, guiding any extra wire back through the mounting plate as you go. Attach wall inlet to mounting plate with provided screws **(Figure 12)**.

Installing Electric Wall Inlet Models CVIV65A or CVIV65W

CAUTION: INSTALLATIDN WDRK AND ELECTRICAL WIRING MUST BE DDNE BY QUALIFIED PERSDN(S) IN ACCDRDANCE WITH ALL APPLICABLE CDDES AND STANDARDS, INCLUDING FIRE-RELATED CDNSTRUCTIDN.

CAUTION: MAKE SURE PDWER IS SWITCHED DFF AT SERVICE PANEL BEFDRE STARTING INSTALLATIDN.

1. Before the drywall is installed, run wire from a nearby electrical outlet box or junction box through the supplied strain relief and into the hole in the mounting plate, leaving about 10" of excess to make the connections to the inlet. Secure the wire in place by tightening the strain relief **(Figure 13)**.

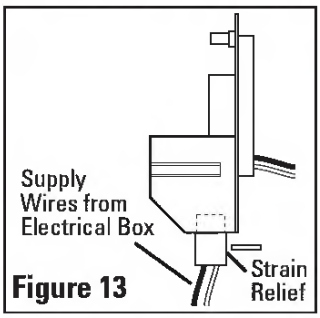

Figure 13

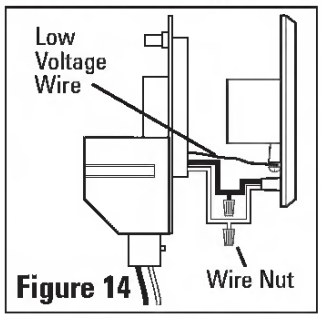

Figure 14

2. Cap the loose wires and tuck back inside of mounting plate. Once the drywall has been completed the wall inlets can be installed. Start by checking the mounting plate for any debris that might have been left from the drywall process and clean if necessary.
3. Connect the low voltage wire to the terminal screws on the rear of the wall inlet. Second connect the black wire from the supply to the black wire of the inlet, then connect the white wire from the supply to the white wire of the inlet. Use approved electrical wire nuts for all connections **(Figure 14)**.
4. Align the inlet screw holes with the mounting plate holes and press the inlet into place, guiding any extra wire back through the mounting plate as you go. Attach wall inlet to mounting plate with provided screws **(Figure 12)**.

NDTE: The electrified wall inlet should be listed on the inspection report for building inspection purposes.

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Installation into Existing Construction

Installing the Inlet Valves

1. Once the desired location of the inlet has been determined, drill a small pilot hole through the subfloor directly below the center of the inlet and as close to the wall as possible **(Figure 15)**.

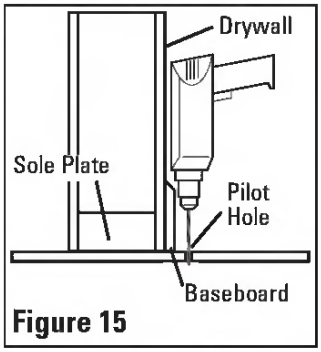

Figure 15

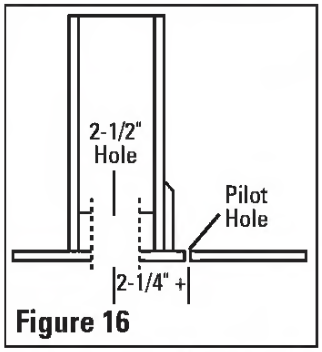

Figure 16

2. From below, locate the pilot hole and measure over approximately 2-1/4" (1/2" for the drywall + 1-3/4" to the center of a standard 2" x 4" sole plate). Add extra for any additional material such as baseboards, thicker drywall, etc. Using a 2-1/2" hole cutter, drill through flooring and sole plate. Using a flashlight, inspect the interior of the wall to confirm that there are no obstructions **(Figure 16)**.

NOTE: Installation height will depend on personal preference, but generally the inlet is installed 18" above the finished floor.

3. After confirming that there are no obstructions within the wall, cut a 2-1/2" x 4-3/8" hole in the wall at the desired wall inlet location **(Figure 17)**.

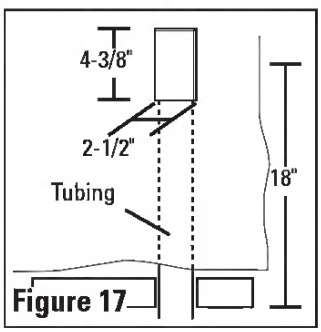

Figure 17

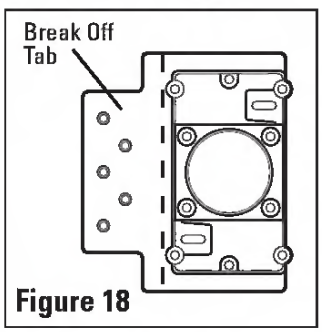

Figure 18

4. Remove the perforated section of the mounting plate **(Figure 18)** and cement a model CVFE90S short 90° elbow to the mounting plate, facing the correct direction to make the connection to the tubing **(Figure 19)** (see step 7 in Installing the Tubing section for cementing instructions).

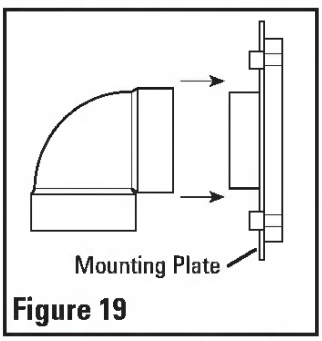

Figure 19

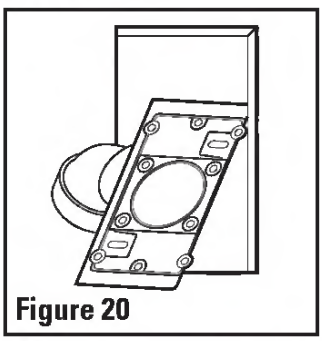
Figure 20

5. Tape the low voltage wire (minimum, solid 18 gauge, two conductor) to the end of a sufficiently long enough piece of tubing and pass it up through the previously drilled hole **(Figure 8)**.
6. Remove the wire and pass it through the upper hole of the mounting plate and connect to the terminal screws on the rear of the wall inlet **(Figure 11)**.
7. Angle the mounting plate and elbow into the previously cut hole in the wall and make the connection with the tubing **(Figure 20)**.
8. Align the inlet screw holes with the mounting plate holes and lightly press the inlet into place, guiding any extra wire back through the mounting plate as you go. Attach wall inlet to mounting plate with provided screws making sure mounting plate is properly seated in hole **(Figure 12)**.

NOTE: Do not cement wall inlet to mounting plate, the built in mounting plate gasket will provide a positive seal.

Installing the Tubing

NOTE: When installing the tubing, start at the farthest inlet and work towards the power unit. Keep the tubing as straight as possible with the least amount of elbows and tees as possible to ensure maximum performance of your system. When installing tees or elbows, make sure the curve in the fitting is aligned so that the air flow is towards the power unit.

1. Measure the length of tubing needed to connect into the main trunk line, adding approximately 3/4" of tubing for insertion into fittings.
2. Cut the tubing, taking care to keep the straight square edge. The use of a miter box is recommended **(Figure 6)**.
3. Remove rough edges with a utility knife or coarse sand paper **(Figure 7)**.
4. Dry fit all pieces and ensure proper fit and alignment before cementing.
5. When dry fitting tubing, run low voltage wire (18 gauge, two conductor) by securing to tubing with tape. Allow approximately 6" of excess wire for connection to each inlet **(Figure 8)**.

NOTE: PVC solvent cement "welds" the fitting to the tubing through a chemical reaction to produce an air tight seal. It is important to make sure all surfaces are clean and free of burrs to ensure a proper seal.

6. Once all tubing has been cut, cleaned, and checked for fit, apply model CVFA35 PVC cement (not included) or equivalent cement to the outside of the tubing covering about 1". **DO NOT** allow any of the cement to enter the inside of the tubing **(Figure 9)**.
7. Insert tubing with cement into fitting with a twisting motion to ensure the cement has been evenly spread. Check that the tubing is evenly seated in the fitting and is aligned properly with the rest of the line **(Figure 10)**.

Installing the Power Unit

1. Determine a mounting location within 5 feet of a grounded electrical outlet and install the included mounting bracket (located inside of collection canister during shipping) using at least two appropriate screws (not included) for the wall material **(Figure 21)**. The bracket must be level and mounted high enough to allow a minimum of 18" from the floor to the bottom of the collection canister.

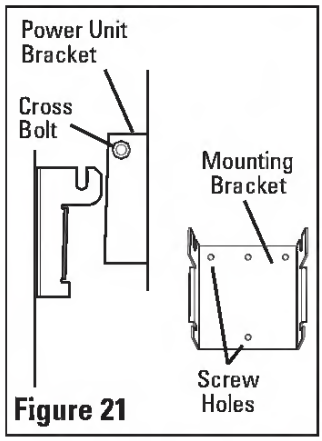

Figure 21

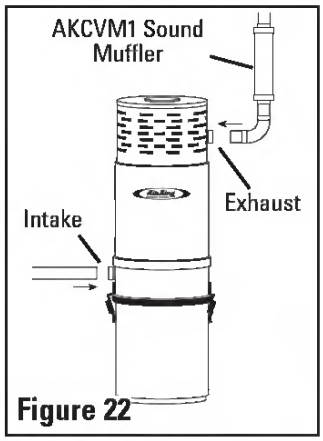

Figure 22

2. Hang power unit on bracket so that it is properly seated between the two brackets of the power unit and tighten cross bolt **(Figure 21)**.
3. Make tubing connections by cementing intake tubing (from the inlets) to the intake valve and connecting exhaust tubing to the exhaust valve. An optional model AKCVM1 sound muffler (not included) can be installed to the exhaust tubing to reduce the sound of the exhaust air **(Figure 22)**.

NOTE: Exhaust should not be vented into a wall, ceiling, or concealed space within the home. It is best to exhaust to the outdoors.

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Wiring

1. Make connections to low voltage wire from inlet to inlet in parallel. Connect any low voltage wire along trunk and branch lines using suitable wire connectors. Connect the low voltage wire to crimp connectors located on the top outside of the power unit **(Figure 23).**

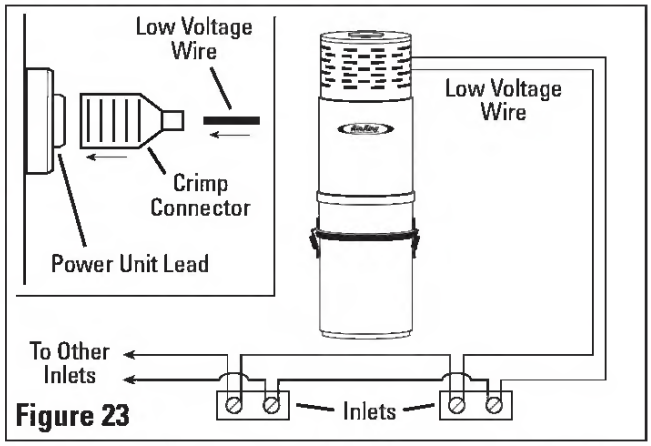

Figure 23

2. Plug the power unit's grounded cord into a 120 volt grounded receptacle.

Check the System

1. Make sure all inlets are closed and the collection canister is in place. Switch the power on using the manual power switch on the power unit to test.
2. Test the inlets by inserting the power hose. The power unit should turn on and begin suctioning. Check for any air leaks in the system.

Maintenance

CAUTION: MAKE SURE POWER UNIT IS UNPLUGGED BEFORE SERVICING THE UNIT.

1. The only regular maintenance your system will need is for the collection canister to be emptied. Usage will dictate how often this needs to be done. To empty the canister, release the two clips on either side of the canister and slide off. When reinstalling, make sure the canister is properly seated in the rubber gasket.
2. Your unit is equipped with a self cleaning filter and it should not be removed. If an excess of debris has built up on the filter you can simply shake it off. It is recommended that you place a large plastic garbage bag under the unit when doing this.

CAUTION: DO NOT USE GASOLINE, BENZINE, THINNER, HARSH CLEANSERS, ETC., AS THEY MAY DAMAGE THE RANGE HOOD. NEVER USE ALCOHOL OR SOLVENTS.

3. If the power unit needs to be cleaned, use a damp towel with a mild detergent, such as dishwashing liquid, and dry with a soft cloth. **NEVER USE ANY ABRASIVE PADS OR SCOURING POWDERS.** Use caution when cleaning around motor area and **DO NOT** allow water to enter into motor chamber. Completely dry the unit before connecting to power source. **NEVER IMMERSE ELECTRICAL PARTS IN WATER.**

LIMITED WARRANTY

All products manufactured by Air King Limited are warranted for one year from the date of purchase against defects in workmanship and/or material. In addition, all ventilating/exhaust fans, heaters, combination fan lights and/or heaters, and range hoods are guaranteed for five years from the date of purchase against defects in workmanship and/or material.

This warranty does not cover any labor or shipping costs or the cost of replacement components as part of routine maintenance such as: range hood grease filters, charcoal filters or combination charcoal/grease filters; replacement light bulbs in range hoods or bathroom fan/light/bulb heater combinations. As well, any damage or failure caused by abuse, misuse, abnormal usage, faulty installation, or improper maintenance will not be covered by this warranty.

In order to make a claim on this warranty, you must be the original consumer of the product. You will be required to present to Air King the original bill of sale showing: date of purchase, place of purchase and model purchased. Failure to meet these requirements will void your warranty.

Air King will not be held responsible for any bodily injury or damages to personal property or real estate whether caused directly or indirectly by the product. Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages and some states do not allow limitations on how long an implied warranty lasts, so these exclusions or limitations may not apply to you. This warranty gives you specific legal rights and you may have other rights which vary from state to state and province to province.

Troubleshooting Guide

Trouble	Probable Cause	Suggested Remedy
1. Unit will not turn on	1. Power unit is not plugged in. 2. Fuse or circuit breaker blown or OFF. 3. Loose connection in wiring to inlets.	1. Plug power unit in. 2. Check main and branch fuse or circuit breaker. 3. Check wire connections to the inlet to insure proper connection.
2. Loss of suction power	1. Collection canister is full. 2. Collection canister not properly installed. 3. Blockage in the hose. 4. Blockage in the pipe.	1. Check to see if collection canister needs to be emptied. 2. Check to make sure canister is properly seated in rubber gasket. 3. Use a long blunt object to clear the blockage 4. Check at inlet location for any obstructions. If the blockage is further into the system, contact your local dealer for assistance.

FOR PARTS OR TECHNICAL ASSISTANCE

Please call: 1-800-465-7300, **MONDAY THROUGH FRIDAY, BETWEEN THE HOURS OF 8 AM AND 4:00 PM EST.**
PLEASE DO NOT RETURN PRODUCT TO PLACE OF PURCHASE.

Reference the type and style of product (located on label on product) when you call.
For more information please visit our website: wwwairkinglimited.com

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